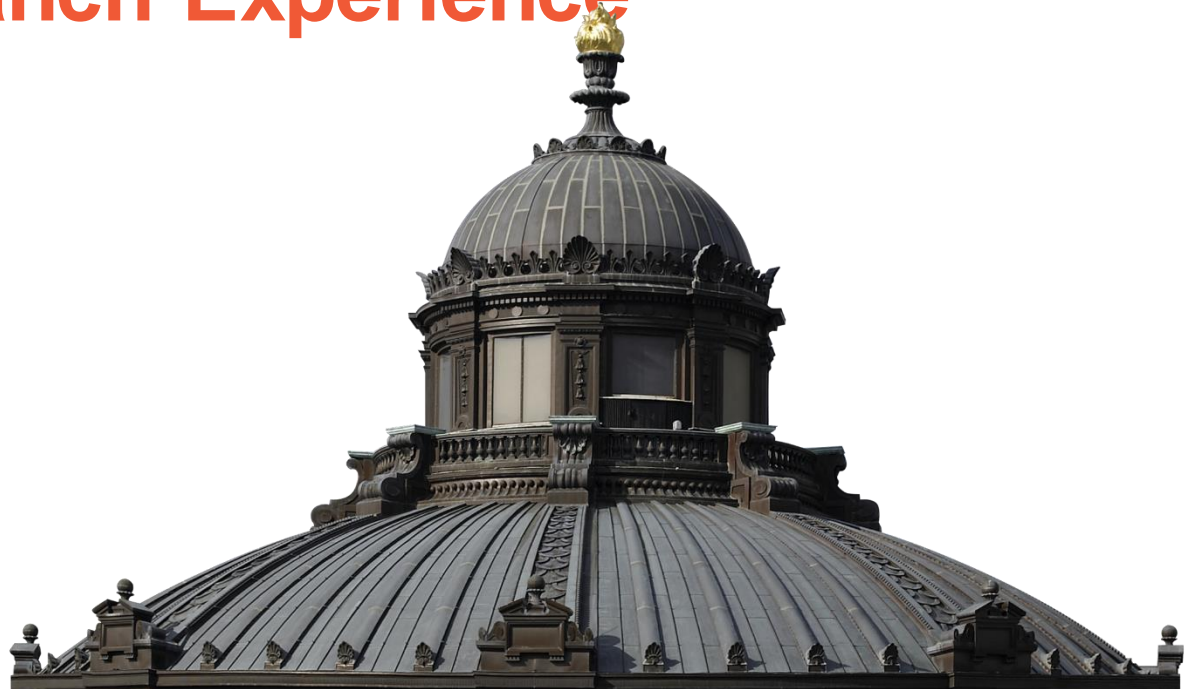

Planning, Constructing and Operating an Offsite High Density Collections Storage Rental Facility - The Cabin Branch Experience



Welcome

- Ft. Meade and Cabin Branch
 - Ft: Meade – a purpose-built, environmentally optimized storage facility
 - Cool: 50 degrees F; 30% rh modules with cold storage rooms at 35 and 25 degrees, 30%rh
 - Redundant systems; 100+ year retention
 - Today's focus is on Cabin Branch, developed for cost efficiency and flexibility using same high density storage plan as Ft. Meade, meeting security standards for special collections, and meeting or exceeds conventional stacks preservation environment

Costs – Cost Ratios: Building

- Able to build out Cabin Branch at app. 50% of the per item cost of Ft Meade
- Some minimum size of project to evoke contractor interest
 - That means some minimum size of project necessary to evoke contractor interest
 - Construction costs that scale: larger the facility, lower the cost per item

Costs – Cost Ratios: Operating

- Operating costs are approximately the same for both
 - Staff is the largest cost of operations, regardless of the specialized HVAC and other systems
 - Make sure your project plan includes forecasts for major maintenance
- Since operating costs are almost the same, gap narrows over time = 50% initially; 65% over time

Costs – Caveats on Cost

- We have given relative costs, rather than specific dollar amounts – why?
 - Construction costs vary greatly by geographic region and market conditions
 - Over 18 years in our region, costs have varied +/- 20% per square foot depending on market conditions 10% - 20% on a multi-million dollar project is a big cost incentive for planning storage investments in advance rather than building at a point of urgent need

Overview

- Presentation will focus on three broad areas related to the Cabin Branch rental facility
 - Planning
 - Constructing
 - Operating
- Full partner cooperation, consideration and planning in each of these areas is critical to success

Cabin Branch External View



Planning – Identifying the Need

- Obtain an interim rental facility to bridge the gap between acquisition and permanent storage
- Facility to store processed and unprocessed collections
- Secure location
- Multi-year leases
- Budget friendly

Planning – Assembling the Team

- Most critical factor in success. All parties need to work as a team
 - Identifying the disciplines
 - Selecting representatives

Planning – Establishing the Requirements

- Location
 - A site within an hour of Capitol Hill
 - A shell or yet-to-be-constructed building
 - Tall structure
 - Well insulated
 - Super flat floor
- Critical is to achieve environmental conditions that will ensure the collections are housed properly

Planning – Environmental Requirements

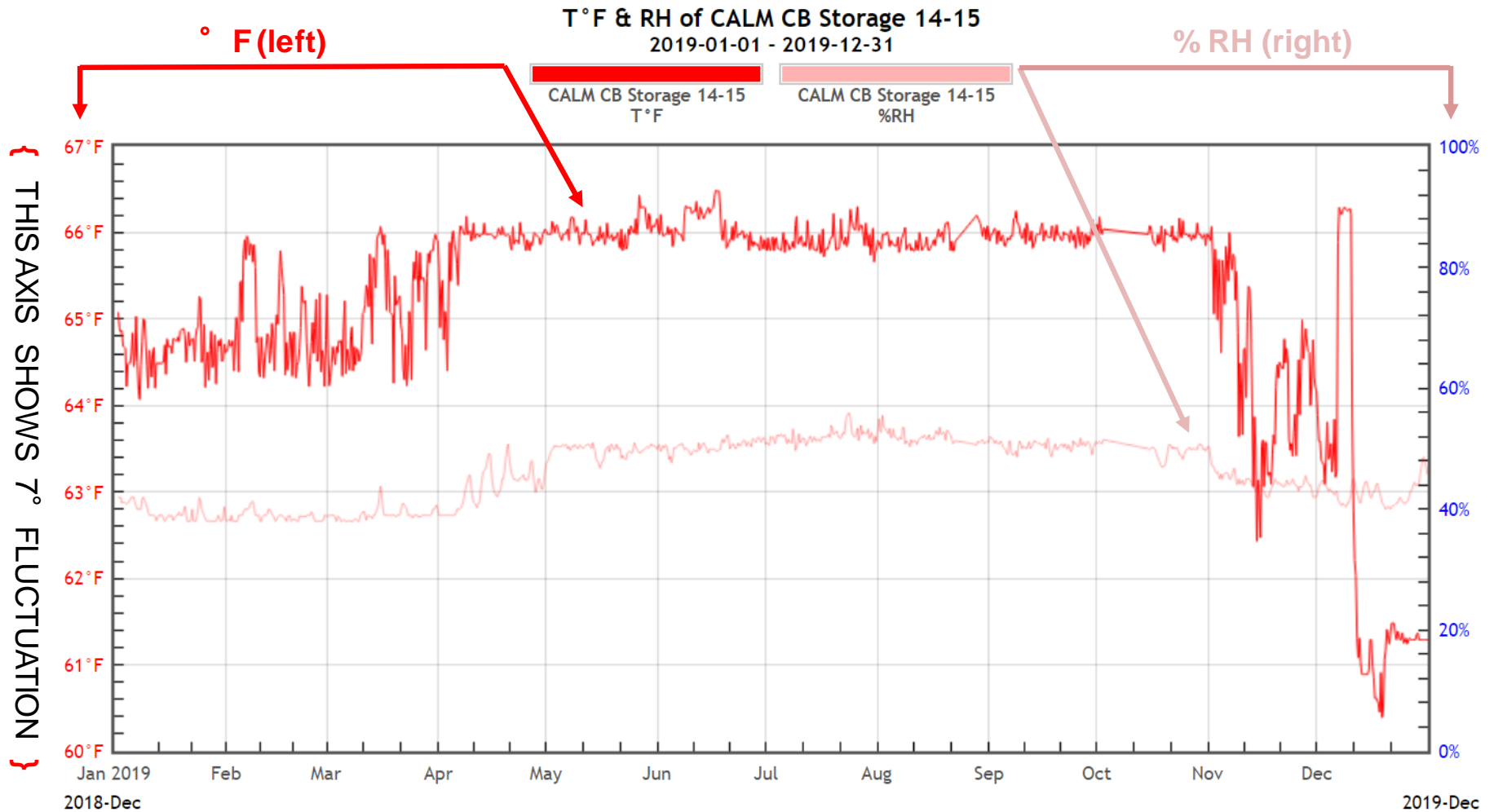
- Avoid storage conditions that create immediate collection risks
 - High RH / biological growth
 - Cycling between RH extremes
 - Potential leaks based in HVAC unit or piping
- Identify *achievable* temperature/RH target that does not accelerate the rate of deterioration
 - Preservation Index ≥ 45

https://www.eclimatenotebook.com/fundamentals_nl.php

Planning – Environmental Requirements

- Humid summer– high dew point limiting factor in Washington DC area
- Identify *achievable* temperature/RH targets that do not accelerate the rate of deterioration
 - Temperature below 70°when possible
 - RH between 35% - 55% with gradual seasonal variation

One year Trend 2019: TWPI 58



Environmental Requirements: Lessons

- Consulting architect and engineers do not typically understand wide RH allowance
- <https://ipisustainability.org/>
- Preservation team must assess risk based on collection type, anticipated handling and collection use
- Be practical. Consider what you have observed about collection condition in known environments when setting targets

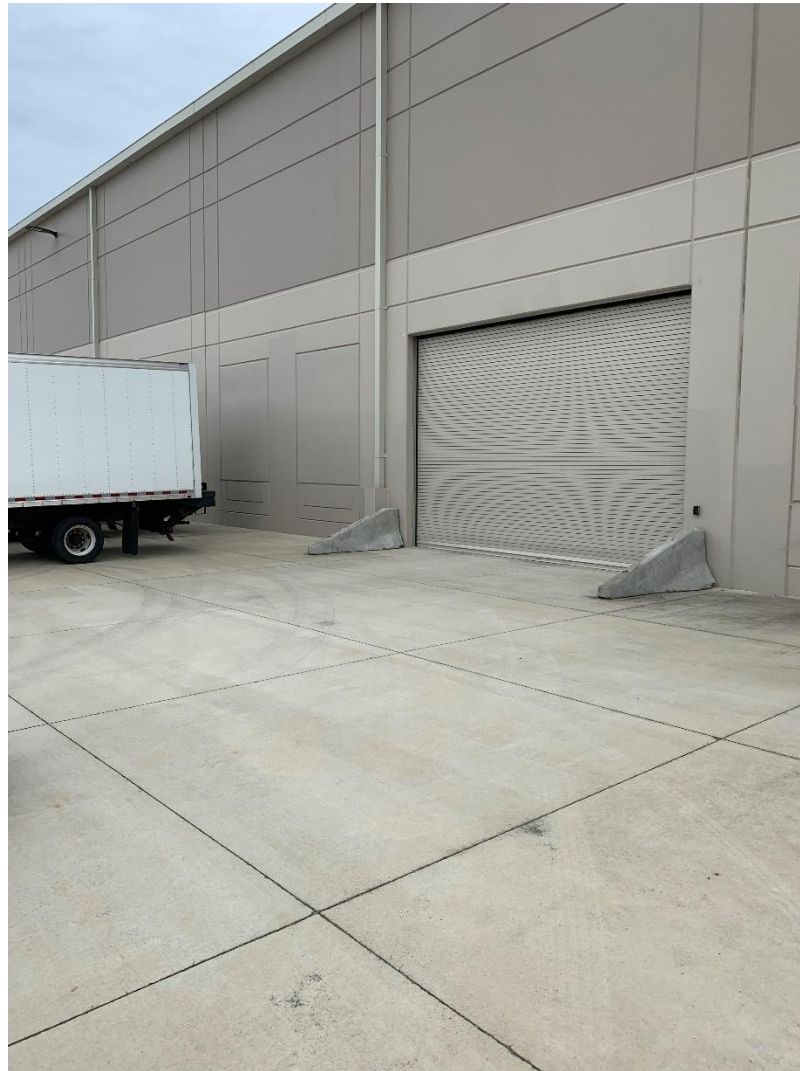
Planning – Facility Compartmentalization

- Separating workspaces from collections storage areas
- Separate Materials Handling Equipment (MHE) charging areas
- Recessed/enclosed loading dock
- Separate areas within the collections storage area
 - Both pallet racking and processed collections shelving are separate

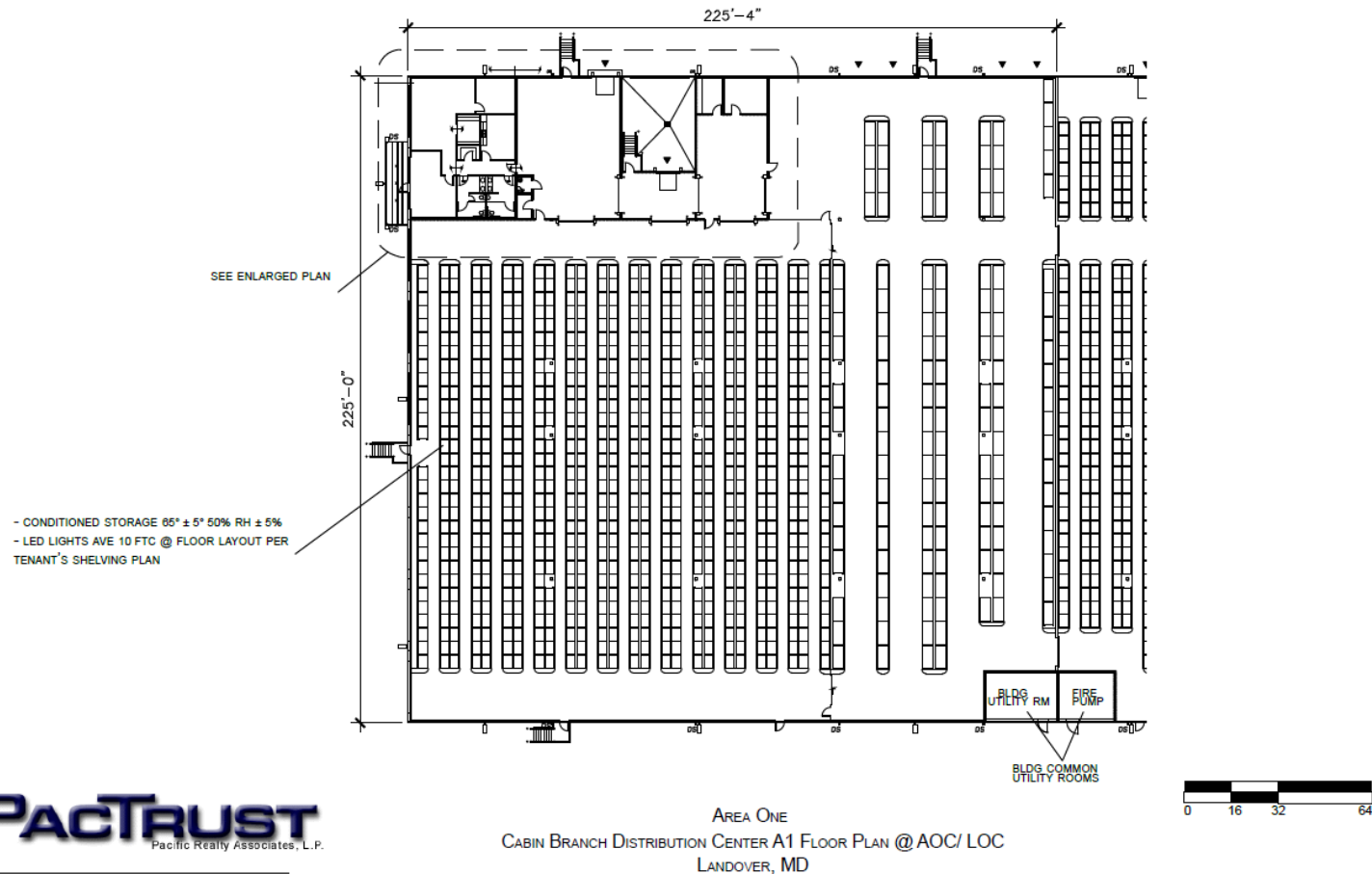
Enclosed Loading Dock



External View of Drive-In Loading Dock



Cabin Branch – Interior Layout



PACTrust
Pacific Realty Associates, L.P.

212043502
MACKENZIE.
DESIGN DRIVEN | CLIENT FOCUSED



Cabin Branch – Pallet Racking for Unprocessed Collections



Cabin Branch – MHE Charging Area



Cabin Branch – MHE



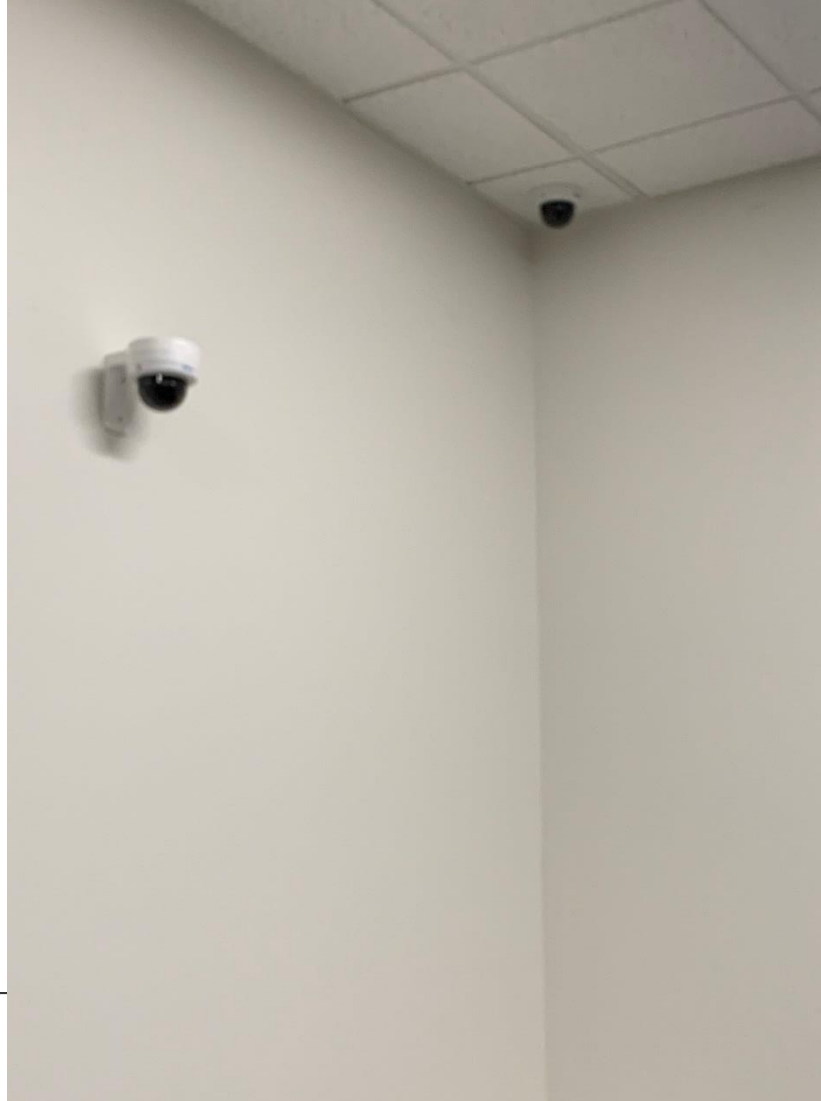
Planning - Other

- Security – electronic and physical
 - Electronic access controls and video surveillance
 - Zoned alarmed areas
- Materials Handling Equipment (MHE) – the facility dictates the type(s)
- Owner/owner agent that is flexible and willing to work closely with the Library to meet our needs

Card Reader – Controlled Access



Surveillance Cameras



Construction

- Identifying the property
- Articulating the need and requirements
- Design
- Establishing a game plan
 - Develop a partnership
 - Establish the team – LC, design firm, construction firm, owner/owner representative, Architect of the Capitol
 - Develop a shared purpose
 - Front-loaded meetings of the team. Then, frequent communication.
 - Establish meeting schedule
 - Site visits

Operations

- For processed collections, the Library employs the Harvard model
 - High bay shelving
 - All books stored in boxes by size
 - Library uses 12 different box sizes – 5 different heights; 5 different widths; and 2 different lengths

Cabin Branch – Typical Book Storage Aisle



Cabin Branch – Typical Shelf Arrangement



Operations – Inventory Control and Tracking

- Inventory Management
- Two different databases: ILS and LAS
 - The Library of Congress uses the Voyager Integrated Library System (ILS)
 - Warehouse Management System for processed collections – we employ the Library Archival System (LAS)
- Barcodes are the word of the day at Cabin Branch
 - Every book has a unique barcode
 - Every box has a unique barcode
 - Every shelf has a unique barcode

Shelf Layout



Item Barcode Linked to Box Barcode



Operations - Service

- Staffing
 - Number
 - Level
- Requests
 - Generated through the locally developed Automated Call Slip (ACS)
 - Request prints at Cabin Branch on a request slip including the item barcode
 - Item barcode entered into the LAS, which then tells which box, on which shelf, in which aisle, etc.
 - Twice daily delivery

Print Callslips



Call Slip Request

3/19/20 8:59 AM

Call Number:

HD82 .S5593 2018 CABIN
BRANCH

Send to:

Study Shelves SJ1084

Request By:

STRIKWERDA, CARL



Request id 589299861

Request id 589299861

Title:

Money and government : the past and future of economics / Robert
Skidelsky.

Author:

Skidelsky, Robert, 1939-

Volume/Year/Date:

20621400

Bib ID:

Comments:

Location:

Jefferson or Adams Building Reading Rooms - STORED OFFSITE



Item Barcode 00509722699

Responses to Requester:

Responses to Requester:

- Filled
 - ☐ Item located and in transit from offsite.
 - ☐ This request is a duplicate of one you sent earlier today.
 - ☐ Your requested item has arrived at the delivery location you specified.
 - ☐ Sent for mailing.
- Unfilled
 - ☐ The item you have requested is not available. It is being processed for transfer offsite.
 - ☐ Your requested offsite item is already in use.
 - ☐ See Note

Request date & time: 3/19/20 7:26 AM
Staff ID: kmoon Call slip queue: Cabin Branch

<https://acs.loc.gov/acs/service/acsRequestServicePrintPage.htm?pageNo=1&roid=5892998...> 3/19/2020

Tabular Retrieval Pick List

03/18/2020 09:21 LIBRARY OF CONGRESS PROD SYSTEM PG 1
RPT# 00724134 kmoon pckret.p

RETRIEVAL PICKING LIST

LIBRARY OF CONGRESS ANNEX RETRIEVAL PICKING LIST - SHELVED TRA

Retrieved: 03/18/2020 Shipped: 03/18/2020
Trip: 8 Courier Service Level: R
Deliver To: LC
Order Nbr: 114359

CUS MEDIA	CNTR	ASL	FACE	LAD	SHF	FMR SEQ	TRAY	ITEM	STOP
LC A	1	703-R	-	25-	9	13	BL18360	00198329551	LC
Aisle Count: 1									
LC A	1	706-L	-	10-	19	08	DL69454	00285062081	LC
Aisle Count: 1									
LC A	1	707-L	-	06-	9	01	DL54149	00173416817	LC
LC A	1	707-R	-	06-	13	02	CH40328	00502001887	LC
Aisle Count: 2									
LC A	1	709-R	-	20-	20	07	BH105782	00188667971	LC
Aisle Count: 1									
LC A	1	710-L	-	21-	21	12	BH112780	00438757119	LC
LC A	1	710-L	-	24-	16	06	CL60766	00510961231	LC
LC A	1	710-R	-	27-	9	06	BH113486	00113313869	LC
Aisle Count: 3									
LC A	1	711-R	-	02-	23	06	BH114384	00224624165	LC
LC A	1	711-R	-	11-	9	11	BH117143	00506206091	LC
Aisle Count: 2									

Operations – Additional Preservation Considerations for Cabin Branch

- Item condition review prior to transfer
- Controlled access and use depending on item condition
- Over-the-road transport using an air conditioned truck
- Specially designed transport containers to ensure item stabilization during transit
- Specially designed carts appropriate for the items transported within the facility and over-the-road transit

Over the Road Cart



Operations – Specially Designed Cart



Questions and Comments

<https://www.loc.gov/rr/askalib/ask-preserved.html>

